

Applicant : Jay Paul White                          Art Unit : 2632  
Serial No. : 09/338,744                          Examiner : B. Lee  
Filed : June 23, 1999  
Title : GLOBAL POSITIONING SYSTEMS APPLICATIONS

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BRIEF ON APPEAL

**(1) Real Party in Interest**

Symbol Technologies, Inc., the assignee, is the real party in interest.

**(2) Related Appeals and Interferences**

There are no related appeals or interferences.

**(3) Status of Claims**

Claims 19, 22, and 25-35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Loomis (U.S. 5,563,607) in view of Hertel (U.S. 5,751,246).

**(4) Status of Amendments**

All amendments have been entered.

**(5) Summary of Invention**

There are two independent claims (19 and 33). Both claims relate to storing items in a warehouse of the type in which items are stored in defined storage locations such as shelves or

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bins. The conventional technique for keeping track of position location in such warehouses is to scan a bar code symbol associated with the shelf or bin at which the item is to be stored. Since each shelf or bin in such a warehouse is unique, it is readily possible to identify each shelf or bin with a unique bar code symbol, and that is the method conventionally followed.

Claim 19 relates to a method of storing items in such a storage facility. The invention goes against the conventional wisdom applied in such storage facilities, by requiring that shelf or bin location be determined not by such bar code scanning but by receiving and processing a GPS signal.

Claim 33 relates to a portable device for use in such a storage facility. The device combines a GPS transceiver for determining the location at which the item is to be stored by recording a GPS signal at that location and a bar code scanner for determining the identity of the device.

#### **(6) Issues**

Whether claims 19, 22, and 25-35 were properly rejected under 35 U.S.C. 103(a) as being unpatentable over Loomis (U.S. 5,563,607) in view of Hertel (U.S. 5,751,246).

#### **(7) Grouping of Claims**

Claims 19, 22, and 25-32 may be considered as one group, with independent claim 19 being representative.

Claims 33-35 may be considered as a second group, with independent claim 33 being representative.

The dependent claims in these two groups (22, 25-32, 34-35) contain additional limitations that enhance patentability, but those limitations are not presently relied upon.

**(8) Argument**

**The First Group of Claims (19, 22, 25-32) Is Patentable**

Loomis teaches nothing that would suggest applying its GPS methods to a warehouse or other storage facility in which items are stored in defined storage locations. The examiner is correct that Loomis suggests applying the disclosed GPS techniques to "Asset Management", and specifically to "inventory management" and "asset tracking systems", but none of these business applications are a suggestion of using GPS in a warehouse in which items are stored in defined storage locations such as shelves and bins. Rather, what Loomis is referring to is the very different and general problem of recording the locations of assets that are stored in undefined storage locations, e.g., the random locations in which manufacturing hardware or office equipment are found through a company's buildings. In that application, there is no readily available way of recording location, and thus using the Loomis GPS technique would be sensible. But what applicant has done is apply GPS to a business method in which it would not, at first, appear to be worthwhile (as position of shelf or bin, for example, can be determined by simply scanning a label associated with the shelf or bin).

The examiner's rejection suggests that the prior art would simply know to apply GPS in the claimed manner, but that is impermissible hindsight on the part of the examiner. There is nothing of record that would support the examiner's conclusion.

Hertel, the examiner's second reference, teaches the use of GPS to assist a shopper in finding the shelf or bin on which a desired item is located. Items are polled to learn their locations, and that information is given to a shopper. That is quite different from the invention's use of GPS, which is to identify the shelf or bin at the time that an item is stored. The art had conventionally used a bar code scanner to read a bar code symbol identifying the shelf or bin at the time that an item was stored. The use in Hertel of GPS information to guide a customer to a shelf or bin would not have taught the prior art to use GPS in the manner required by the invention. It is only with the 20/20 hindsight afforded by knowledge of the invention that the examiner can view Hertel as leading the art toward the invention.

A second shortcoming of Loomis is that it fails to teach the use of a bar code scanner for the purpose required in claim 19 (to determine the identity of the item being stored). The description in Loomis of a bar code scanner is extremely vague. The only mention of the

scanner is at col. 7, line 47, and it is very unclear what its function is. The bar code scanner is said to be an "optional external unit" to which the "rover unit" containing the GPS equipment is connected. But absolutely nothing is said about what the bar code scanner is to be used for. The next several sentences in column 7 refer to "tagging" of a location or article, but we know from elsewhere in the specification of Loomis that "tagging" is a reference to time tagging, for later use in differential correction of GPS data. Thus, not only does Loomis fail to teach applicant's business method of using GPS to determine storage position in a warehouse with defined storage locations, but it also fails to teach with sufficient definiteness the use of a bar code symbol to identify the items being stored.

To make up for this serious shortcoming of Loomis, the examiner relies on applicant's description of the use of bar code scanners in conventional warehouse systems. Applicant does not contend that bar code scanners had not been used in warehouse systems. The point applicant is making is that the combination of using GPS to record position at the time of storage, and bar code scanning to record identity, was new and not obvious. During prosecution before the examiner, applicant went carefully through what Loomis taught about bar code scanning in order to show that Loomis had not thought of this combination of GPS and bar code scanning. It is no answer to the fact that neither Loomis nor Hertel teach or suggest the combination for the examiner to merely point to the admitted fact that bar code scanning, by itself, had been used in warehouse storage systems.

A third shortcoming of Loomis is that it teaches nothing about associating in a database the GPS position information and the item identification information obtained from bar code scanning. The examiner has attempted to meet this shortcoming of Loomis by asserting, without the slightest support, that using a database with the system of Loomis would be necessary or obvious. More than such a bald assertion is required to make out a case of obviousness.

#### **The Second Group of Claims (33-35) Is Patentable**

Neither Loomis nor Hertel teach combining in the same device both a GPS transceiver capable of determining the location at which an item is to be stored and a bar code scanner for determining the identity of the item to be stored. The examiner appears to rely on the teaching in Loomis of a bar code scanner, but as discussed above in connection with the first group of

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claims, the disclosure in Loomis is so vague that it cannot be ascertained whether the bar code scanner is combined in the same portable device with the GPS receiver, nor whether the bar code scanner is used to identify the item being stored.

The examiner's rejections should be reversed.

The brief fee of \$310 is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 8/6/01

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### **Appendix of Claims**

19. A method for storing items in a storage facility, wherein the storage facility is a warehouse or other facility in which the items are stored in defined storage locations such as shelves or bins, the method comprising:

determining the location at which an item is to be stored by recording a GPS signal received by a transceiver positioned at the location;

processing the GPS signal to determine the storage location;

determining the identity of the item from scanning a symbol associated with the item; and associating the storage location and identity in a database.

22. The method of claim 19 wherein the storage facility is a retail store in which the items are stored on display racks or shelves.

25. The method of claim 19 wherein the symbol associated with the item is a bar code symbol.

26. The method of claim 25 wherein the bar code symbol is scanned using a hand held scanner when the item is stored.

27. The method of claim 26 wherein the bar code symbol is scanned using a hand held scanner when the item is removed from storage.

28. The method of claim 19 wherein the GPS signal received by the transceiver is corrected to remove errors by comparing the GPS signal to a GPS signal received at a base station at a known location.

29. The method of claim 28 wherein location error is removed in real time by establishing communication between the transceiver and the base station.

30. The method of claim 28 wherein the location error is removed at a later time by recording the time at which the transceiver recorded the GPS signal; simultaneously recording another GPS signal at a base station of a known location; and using correction factors derived from the GPS signal recorded at the base station to remove the location error for the transceiver at corresponding times.

31. The method of claim 19 wherein the recording of the GPS signal by the transceiver and the scanning of the symbol are performed by the same portable device.

32. The method of claim 19 wherein  
the symbol associated with the item is a bar code symbol;  
the scanning at the time that item is stored and at the time that it is retrieved is performed using a bar code scanner contained in a portable device;  
the GPS signal received by the transceiver is corrected to remove errors by comparing the GPS signal to a GPS signal received at a base station at a known location; and  
the recording of the GPS signal by the transceiver and the scanning of the symbol are performed by the portable device.

33. A portable device for recording the identity and location of items stored in a storage facility, wherein the storage facility is a warehouse or other facility in which the items are stored in defined storage locations such as shelves or bins, the device comprising:

a GPS transceiver capable of determining the location at which the item is to be stored by recording a GPS signal received at the location; and  
a bar code scanner for determining the identity of the item by scanning a symbol associated with the item.

34. The portable device of claim 33 wherein the GPS transceiver and bar code scanner are integral parts of the device.

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35. The portable device of claim 33 further comprising a wireless communication transceiver for handling data communication between the portable device and a base station.